

Inventors

Cheu 09/766,659

May 21, 2004

L3 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:241713 HCAPLUS
DOCUMENT NUMBER: 122:75648
ENTRY DATE: Entered STN: 13 Dec 1994
TITLE: A carbohydrate biosensor surface for the detection of uropathogenic bacteria
AUTHOR(S): Nilsson, Kurt G. I.; Mandenius, Carl-Fredrik
CORPORATE SOURCE: Lund, S-223 70, Swed.
SOURCE: Bio/Technology (1994), 12(13), 1376-8
CODEN: BTCHDA; ISSN: 0733-222X
PUBLISHER: Nature Publishing Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 9-1 (Biochemical Methods)
ABSTRACT:

We have developed a new surface for use in biosensors that is based on a gold plate covered with a specific carbohydrate receptor structure. The carbohydrate, Gal α 1-4Gal, was bound covalently via a thioalkylcarboxy-spacer, or adsorbed as a neoglycoprotein, to a two-dimensional gold surface. Both types of surfaces showed high specificity in the binding of the uropathogenic bacteria P-fimbriated Escherichia coli compared to the binding of non-infectious bacteria. The signal to noise ratio is sufficiently high to allow specific detection of the bacteria in biosensor applications.

SUPPL. TERM: carbohydrate biosensor surface uropathogenic bacteria detection
INDEX TERM: Escherichia coli
(P-fimbriated; carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Albumins, uses
ROLE: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(bovine, carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Biosensors
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Carbohydrates and Sugars, uses
ROLE: DEV (Device component use); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Bacteria
(uropathogenic, carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: 7440-57-5, Gold, uses
ROLE: DEV (Device component use); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: 160294-57-5 160294-57-5D, conjugate with bovine serum albumin
ROLE: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1995:235036 HCAPLUS
 DOCUMENT NUMBER: 122:4932
 ENTRY DATE: Entered STN: 10-Dec-1994
 TITLE: Immobilized carbohydrate biosensor for detection of
 proteins, viruses, or cells
 INVENTOR(S): Nilsson, Kurt; Mandenius,
 Carl-Fredrik
 PATENT ASSIGNEE(S): Swed.
 SOURCE: PCT Int. Appl., 14 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: G01N033-543
 SECONDARY: C12Q001-00
 CLASSIFICATION: 9-1 (Biochemical Methods)
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9424561	A1	19941027	WO 1994-SE343	19940418
W: CA, CZ, JP, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 648333	A1	19950419	EP 1994-914654	19940418
EP 648333	B1	20020109		
R: DE, ES, FR, GB, IT, SE				
US 6231733	B1	20010515	US 1994-356229	19941219
US 2001017270	A1	20010830	US 2001-766659	20010123
PRIORITY APPLN. INFO.:		SE 1993-1270	A	19930419
		WO 1994-SE343	W	19940418
		US 1994-356229	A1	19941219

ABSTRACT:

A biosensor is disclosed in which an immobilized carbohydrate or a derivative thereof is used to generate a detectable signal when a protein, virus, or cell is bound to the carbohydrate surface. The sensor is an optical sensor, a piezoelec. sensor, an electrochem. electrode, or a thermistor. A method of binding carbohydrates to a gold surface is also described.

SUPPL. TERM: immobilized carbohydrate biosensor; protein detection
 immobilized carbohydrate biosensor; virus detection
 immobilized carbohydrate biosensor; cell detection
 immobilized carbohydrate biosensor

INDEX TERM: Urinary tract
 (bacteria; immobilized carbohydrate biosensor for
 detection of proteins, viruses, or cells)

INDEX TERM: Receptors
 ROLE: BPR (Biological process); BSU (Biological study,
 unclassified); BIOL (Biological study); PROC (Process)
 (carbohydrate sequence; immobilized carbohydrate
 biosensor for detection of proteins, viruses, or cells)

INDEX TERM: (Biosensors)
 Cell
 Electrodes
 Escherichia coli
 Immobilization, biochemical

Virus
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Proteins, analysis
ROLE: ANT (Analyte); ANST (Analytical study)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Aglycons
Carbohydrates and Sugars, biological studies
Glycopeptides
Glycoproteins, biological studies
Oligosaccharides
Thiols, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Hexosamines
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(residue; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Bacteria
(urinary tract; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Albumins, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(conjugates, with galabiose derivative; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Amino acids, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(glycosyl, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Glycoproteins, specific or class
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(neo-, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(optical, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(piezoelec., immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(thermistor-based, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 75281-88-8D, derivs.
ROLE: DEV (Device component use); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 7440-57-5, Gold, biological studies 13117-26-5D,

Galabiose, derivs., albumin conjugates 30232-12-3,
Mercaptopropionic acid
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(immobilized carbohydrate biosensor for detection of
proteins, viruses, or cells)

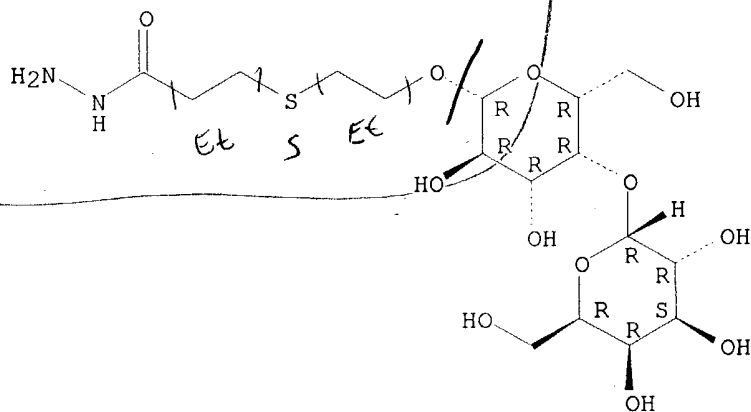
INDEX TERM: 151-51-9, Carbodiimide
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(immobilized carbohydrate biosensor for detection of
proteins, viruses, or cells)

INDEX TERM: 13117-26-5
ROLE: BPR (Biological process); BSU (Biological study,
unclassified); BIOL (Biological study); PROC (Process)
(receptor; immobilized carbohydrate biosensor for
detection of proteins, viruses, or cells)

INDEX TERM: 50-99-7, D-Glucose, biological studies 50-99-7D,
D-Glucose, analogs 58-86-6, Xylose, biological studies
58-86-6D, Xylose, analogs 59-23-4, Galactose, biological
studies 59-23-4D, Galactose, analogs 131-48-6,
N-Acetylneuraminic acid 131-48-6D, N-Acetylneuraminic
acid, analogs 2438-80-4, Fucose 2438-80-4D, Fucose,
analog 3458-28-4, Mannose 3458-28-4D, Mannose, analogs
ROLE: DEV (Device component use); THU (Therapeutic use);
BIOL (Biological study); USES (Uses)
(residue; immobilized carbohydrate biosensor for
detection of proteins, viruses, or cells)

L4 ANSWER 1 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 160294-57-5 REGISTRY
CN Propanoic acid, 3-[[2-[(4-O- α -D-galactopyranosyl- β -D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H32 N2 O12 S
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

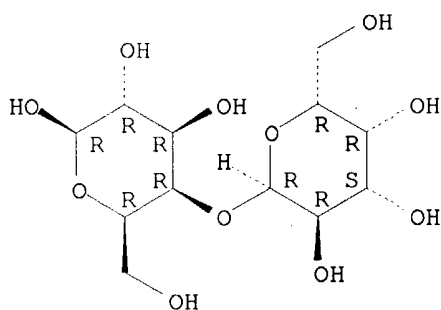


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 75281-88-8 REGISTRY
CN β -D-Galactopyranose, 4-O- α -D-galactopyranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H22 O11
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

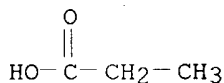
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

24 REFERENCES IN FILE CA (1907 TO DATE)
 8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 24 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 30232-12-3 REGISTRY
 CN Propanoic acid, mercapto- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Propionic acid, mercapto- (7CI)
 OTHER NAMES:
 CN Mercaptopropionic acid
 MF C3 H6 O2 S
 CI IDS, COM
 LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD,
 CAPLUS, CASREACT, CIN, EMBASE, IFICDB, IFIPAT, IFIUDB, RTECS*,
 TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)



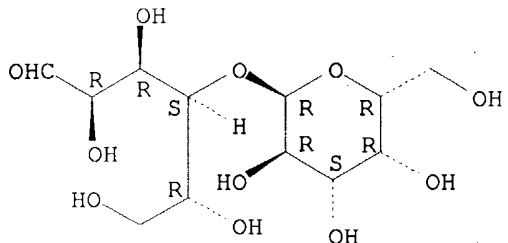
D1-SH

154 REFERENCES IN FILE CA (1907 TO DATE)
 28 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 154 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 4 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 13117-26-5 REGISTRY
 CN D-Galactose, 4-O-α-D-galactopyranosyl- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Galactose, 4-O-α-D-galactopyranosyl- (7CI)
 CN Galactose, 4-O-α-D-galactopyranosyl-, D- (8CI)
 OTHER NAMES:
 CN α-D-Galp-(1-4)-D-Gal

CN 4 α -Galactobiose
 CN Galabiose
 FS STEREOSEARCH
 MF C12 H22 O11
 LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT,
 CAOLD, CAPLUS, MEDLINE, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

99 REFERENCES IN FILE CA (1907 TO DATE)
 8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 99 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN

RN 7440-57-5 REGISTRY

CN Gold (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN A 4631
 CN A 4953
 CN AY 5022
 CN Britecote
 CN Burnish Gold
 CN C.I. 77480
 CN C.I. Pigment Metal 3
 CN Colloidal gold
 CN Furuuchi 8560
 CN G 1402
 CN Gold 197
 CN Gold black
 CN Gold element
 CN Gold Flake
 CN Gold Leaf
 CN Gold Powder
 CN Palegold 5550
 CN Perfect Gold
 CN PH 870
 CN SG 10NK
 CN Shell Gold
 CN TR 1306
 DR 33019-35-1
 MF Au

CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE,
ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT,
IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*,
TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Au

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

138772 REFERENCES IN FILE CA (1907 TO DATE)
4092 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
138913 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN

RN 3458-28-4 REGISTRY

CN D-Mannose (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Mannose, D- (8CI)

OTHER NAMES:

CN (+)-Mannose

CN Carubinose

CN D(+)-Mannose

CN Mannose

CN NSC 26247

CN Seminose

AR 530-26-7

FS STEREOSEARCH

DR 147-74-0

MF C6 H12 O6

CI COM

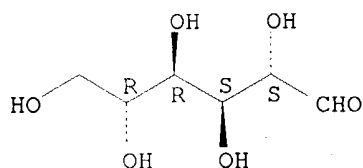
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DETHERM*, EMBASE, GMELIN*, HODOC*,
IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
NIOSHTIC, PIRA, PROMT, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USPAT2,
USPATFULL

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13669 REFERENCES IN FILE CA (1907 TO DATE)
 623 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 13685 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN

RN 2438-80-4 REGISTRY

CN L-Galactose, 6-deoxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Fucose, L- (8CI)

OTHER NAMES:

CN (-)-Fucose

CN (-)-L-Fucose

CN 6-Deoxy-L-galactose

CN 6-Desoxygalactose

CN Fucose

CN L-(-)-Fucose

CN L-Fucose

CN L-Galactomethylose

AR 87-96-7, 3713-31-3

FS STEREOSEARCH

MF C6 H12 O5

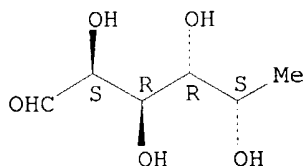
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN,
 CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
 NIOSHTIC, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL
 (*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5035 REFERENCES IN FILE CA (1907 TO DATE)
240 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5039 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 8 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 151-51-9 REGISTRY
CN Methanediimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carbodiimide (6CI, 7CI, 8CI)
OTHER NAMES:
CN Stabilisator 9000
FS 3D CONCORD
MF C H2 N2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSNB, EMBASE,
GMELIN*, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT, TOXCENTER, USPAT2,
USPATFULL
(*File contains numerically searchable property data)

HN=C=NH

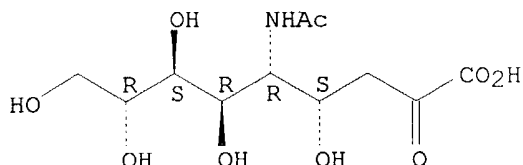
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

733 REFERENCES IN FILE CA (1907 TO DATE)
199 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
734 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 9 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 131-48-6 REGISTRY
CN Neuraminic acid, N-acetyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-glycero-D-galacto-2-Nonulosonic acid, 5-(acetylamino)-3,5-dideoxy-
CN D-glycero-D-galacto-Nonulosonic acid, 5-acetamido-3,5-dideoxy- (8CI)
CN Lactaminic acid (7CI)
OTHER NAMES:
CN 5-N-Acetyl-D-neuraminic acid
CN 5-N-Acetylneuraminic acid
CN Aceneuramic acid
CN Acetylneuraminic acid
CN N-Acetyl-D-neuraminic acid
CN N-Acetylneuramic acid
CN N-Acetylneuraminic acid
CN N-Acetylsialic acid
CN NANA
FS STEREOSEARCH
DR 6918-20-3, 11032-36-3, 14752-56-8, 5977-25-3, 6225-16-7
MF C11 H19 N O9
CI COM
LC STN Files: ADISINSIGHT, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS,
BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN,
CHEMCATS, CHEMLIST, CIN, CSCHM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT,
IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PHAR, PROMT, PROUSDDR,

SPECINFO, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, NDSL**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2516 REFERENCES IN FILE CA (1907 TO DATE)
 161 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 2518 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 10 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN

RN 59-23-4 REGISTRY

CN D-Galactose (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Galactose, D- (8CI)

OTHER NAMES:

CN (+)-Galactose

CN D-(+)-Galactose

CN Galactose

FS STEREOSEARCH

DR 147-76-2, 3812-56-4, 400876-94-0

MF C6 H12 O6

CI COM

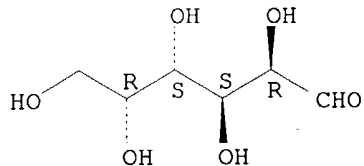
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USPAT2, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).

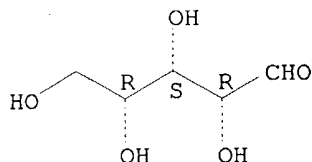


****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

21536 REFERENCES IN FILE CA (1907 TO DATE)
761 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
21559 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 58-86-6 REGISTRY
CN D-Xylose (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Xylose, D- (8CI)
OTHER NAMES:
CN (+)-Xylose
CN D-(+)-Xylose
CN Wood sugar
CN Xylose
FS STEREOSEARCH
DR 133-56-2, 141492-19-5
MF C5 H10 O5
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DDFU, DETHERM*, DIOGENES, DRUGU,
EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO,
SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

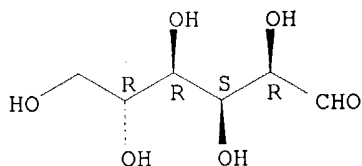
****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

13871 REFERENCES IN FILE CA (1907 TO DATE)
317 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13882 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 12 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN 50-99-7 REGISTRY
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (+)-Glucose
CN Anhydrous dextrose

CN Cartose
CN Cerelose
CN Cerelose 2001
CN Clearsweet 95
CN Clintose L
CN Corn sugar
CN CPC hydrate
CN D(+)-Glucose
CN D-glucose
CN Dextropur
CN Dextrose
CN Dextrosol
CN Glucodin
CN Glucolin
CN Glucose
CN Glucosteril
CN Goldsugar
CN Grape sugar
CN Maxim Energy Gel
CN Roferose ST
CN Staleydex 111
CN Staleydex 130
CN Staleydex 333
CN Sugar, grape
CN Tabfine 097(HS)
CN Vadex
FS STEREOSEARCH
DR 8012-24-6, 8030-23-7, 162222-91-5, 165659-51-8, 50933-92-1, 80206-31-1
MF C6 H12 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,
CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB,
DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB,
IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
NIOSTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA,
ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

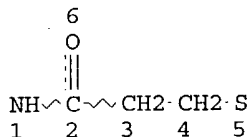


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

167083 REFERENCES IN FILE CA (1907 TO DATE)
2199 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
167254 REFERENCES IN FILE CAPLUS (1907 TO DATE)

14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L5 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

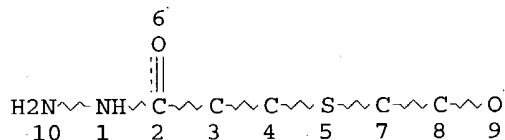
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L8 9777 SEA FILE=REGISTRY SSS FUL L5

L9 STR



-OEESEECONHNH-

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L10 17 SEA FILE=REGISTRY SUB=L8 SSS FUL L9

L18 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L10

L19 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND (IMMOBIL? OR COAT? OR ATTACH? OR BIOSENS? OR BIOCHIP? OR BIO?(2A)?SENS?)

L20 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L19

=> d l20 ibib abs hitind hitstr 1-10

L20 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:711448 HCAPLUS

DOCUMENT NUMBER: 126:89666

TITLE: Synthesis of ligands related to the Vibrio cholerae O-specific antigen. Part 12. Synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of Vibrio cholerae O:1, serotype Inaba and Ogawa, bearing aglycons suitable for linking to proteins

AUTHOR(S): Ogawa, Yuji; Lei, Ping-sheng; Kovac, Pavol

CORPORATE SOURCE: Natl. Inst. Health, NIDDK, Bethesda, MD, 20892-0815, USA

SOURCE: Carbohydrate Research (1996) 293(2), 173-194

CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The title substances were prepared from intermediate, fully acetylated α -trimethylsilylethyl (SE) glycosides. The latter were assembled in a blockwise manner, using as the glycosyl donor the α -glycosyl chloride of a disaccharide bearing two 4-azido-4-deoxy functions. Next, the azido groups in the assembled hexasaccharides were converted to the corresponding amines, and these were acylated with 4-O-benzyl-3-deoxy-L-glycero-tetronic acid in the presence of a water-soluble carbodiimide. The Se glycoside were then transformed to glycosyl imidates, and these were coupled with Me 6-hydroxyhexanoate or Me 2-(2-hydroxyethylthio)propionate. The aglycons in the glycosides thus obtained were then converted to the corresponding carboxylic acids or acyl hydrazides. Such compds. are suitable for linking to proteins to obtain neoglycoproteins.

CC 33-7 (Carbohydrates)

IT 4547-43-7P, Methyl 6-hydroxyhexanoate 185248-27-5P 185248-28-6P
185248-29-7P 185248-30-0P 185248-54-8P 185248-55-9P
185248-56-0P 185248-57-1P 185248-58-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of *Vibrio cholerae*)

IT 185248-54-8P 185248-58-2P

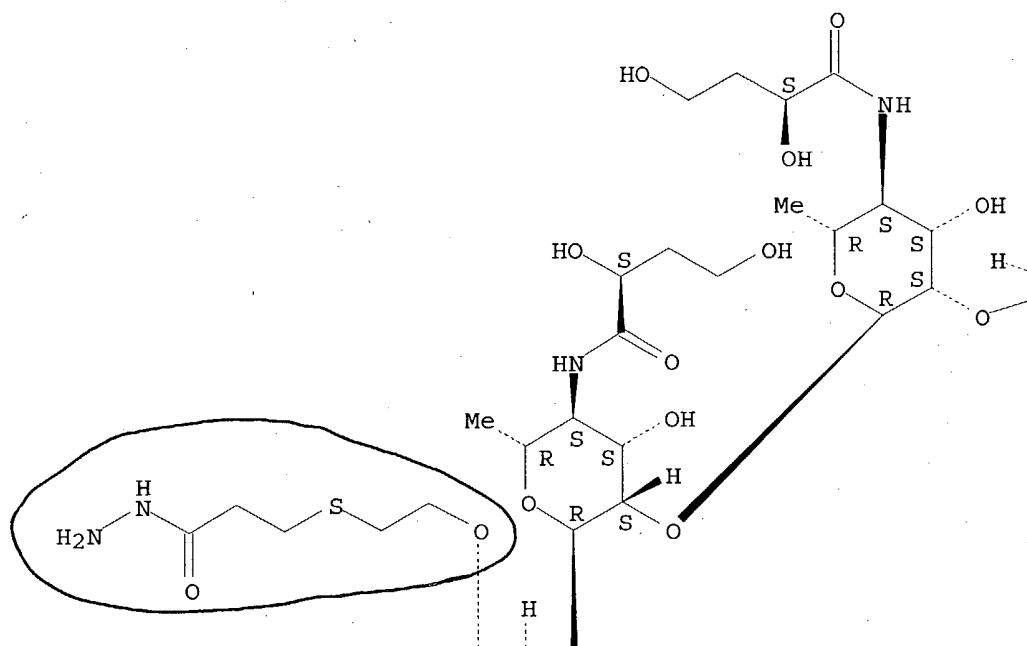
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of *Vibrio cholerae*)

RN 185248-54-8 HCAPLUS

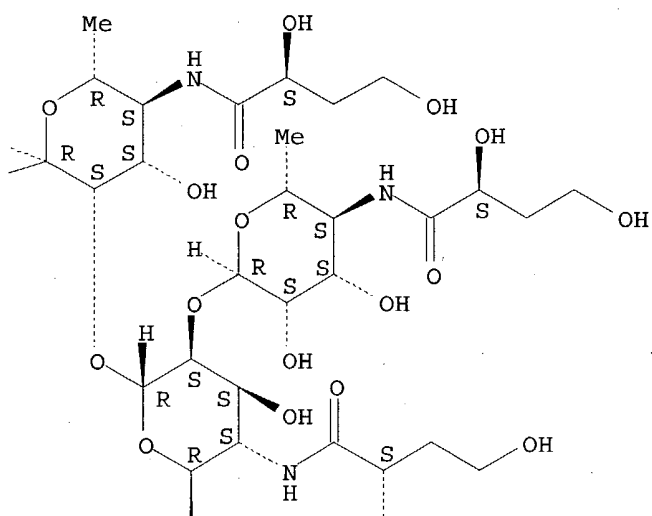
CN Propanoic acid, 3-[[2-[[O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl]oxy]ethylthio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

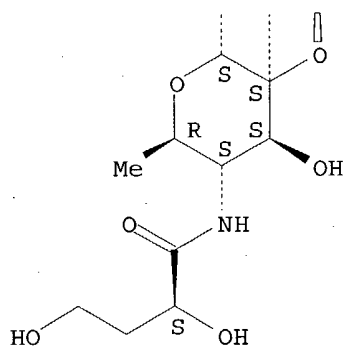
PAGE 1-A



PAGE 1-B



PAGE 2-A



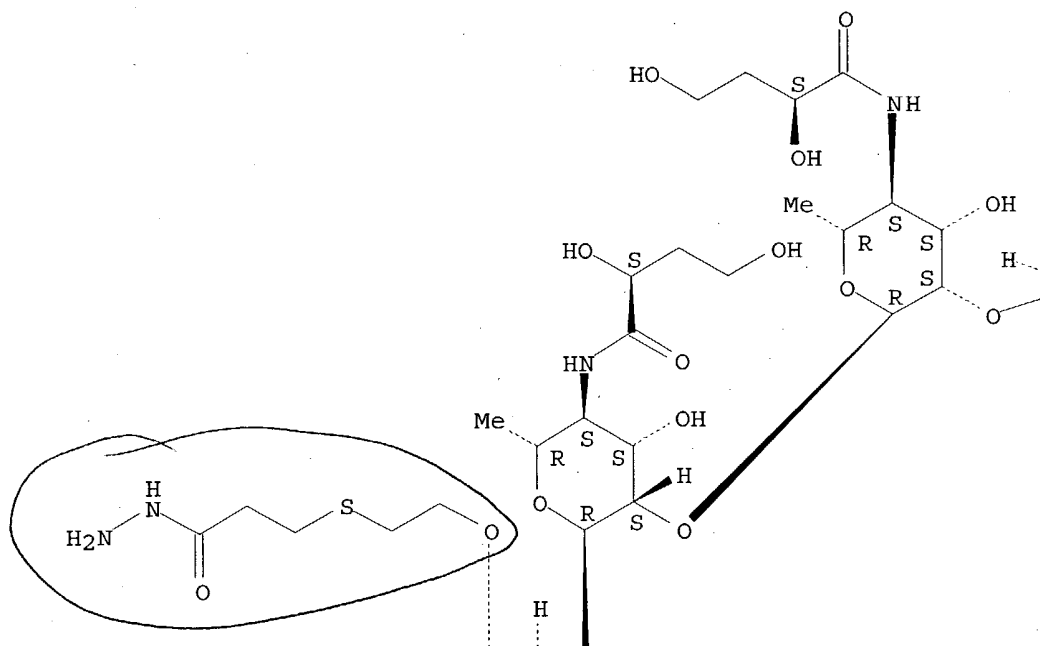
PAGE 2-B



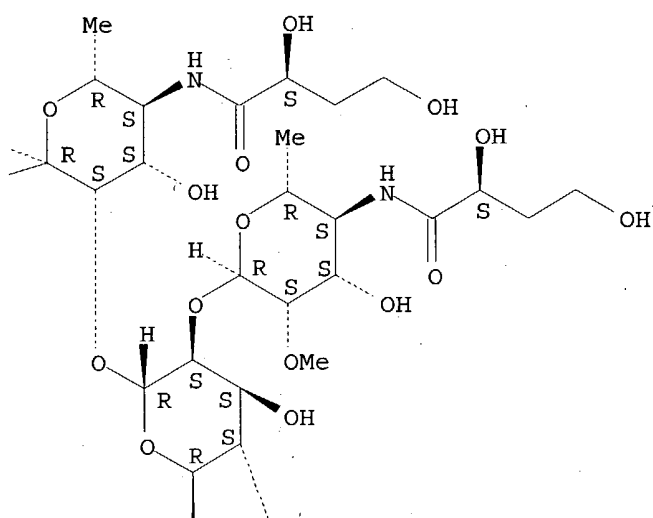
RN 185248-58-2 HCAPLUS
 CN Propanoic acid, 3-[[2-[[O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-2-O-methyl- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-O-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl-(1 \rightarrow 2)-4,6-dideoxy-4-[[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]- α -D-mannopyranosyl]oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

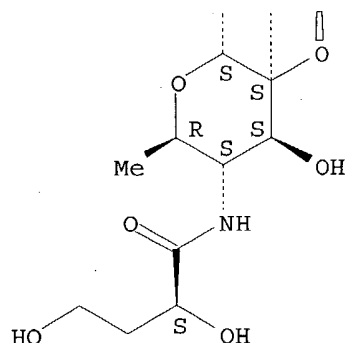
PAGE 1-A



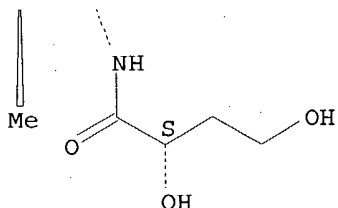
PAGE 1-B



PAGE 2-A



PAGE 2-B



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:504622 HCAPLUS

DOCUMENT NUMBER: 125:276374

TITLE: Synthesis of ligands related to *Vibrio cholerae* O-specific antigen. II. Synthesis of four glycosides of a disaccharide fragment representing the terminus of the O-polysaccharide of *Vibrio cholerae* O:1, serotype Inaba, bearing aglycons suitable for linking to proteins

AUTHOR(S): Ogawa, Yuji; Lei, Ping-sheng; Kovac, Pavol

CORPORATE SOURCE: NIDDK, Nat. Inst. Health, Bethesda, MD, 20892-0815, USA

SOURCE: Carbohydrate Research (1996), 288, 85-98

CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Me 4-azido-3-O-benzyl-4,6-dideoxy- α -D-mannopyranoside was converted into disaccharide glycosides fragment of the terminus of the O-polysaccharide of *Vibrio cholerae* O:1.

CC 33-7 (Carbohydrates)

IT 182273-70-7P 182273-73-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of glycosides of a disaccharide fragment representing the terminus of O-polysaccharide of *Vibrio cholerae* O:1)

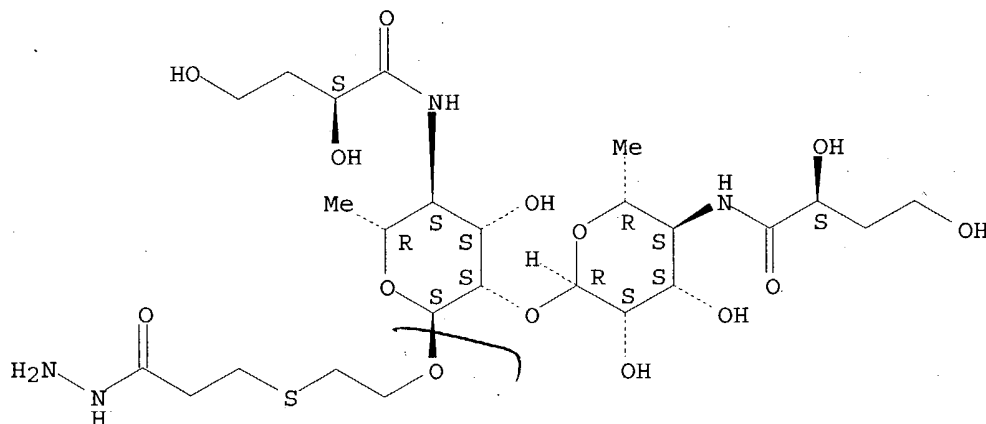
IT 182273-73-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of glycosides of a disaccharide fragment representing the

terminus of O-polysaccharide of *Vibrio cholerae* O:1)

RN 182273-73-0 HCAPLUS
 CN Propanoic acid, 3-[[[2-[[[4,6-dideoxy-2-O-[4,6-dideoxy-4-[(2,4-dihydroxy-1-oxobutyl)amino]- α -D-mannopyranosyl]-4-[(2,4-dihydroxy-1-oxobutyl)amino]- α -D-mannopyranosyl]oxy]ethyl]thio]-, hydrazide, [2(S),4(S)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L20 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1995:241713 HCAPLUS
 DOCUMENT NUMBER: 122:75648
 TITLE: A carbohydrate **biosensor** surface for the detection of uropathogenic bacteria
 AUTHOR(S): Nilsson, Kurt G. I.; Mandenius, Carl-Fredrik
 CORPORATE SOURCE: Lund, S-223 70, Swed.
 SOURCE: Bio/Technology (1994), 12(13), 1376-8
 CODEN: BTCHDA; ISSN: 0733-222X
 PUBLISHER: Nature Publishing Co.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB We have developed a new surface for use in **biosensors** that is based on a gold plate covered with a specific carbohydrate receptor structure. The carbohydrate, Gal α 1-4Gal, was bound covalently via a thioalkylcarboxy-spacer, or adsorbed as a neoglycoprotein, to a two-dimensional gold surface. Both types of surfaces showed high specificity in the binding of the uropathogenic bacteria P-fimbriated *Escherichia coli* compared to the binding of non-infectious bacteria. The signal to noise ratio is sufficiently high to allow specific detection of the bacteria in **biosensor** applications.

CC 9-1 (Biochemical Methods)

ST carbohydrate **biosensor** surface uropathogenic bacteria detection

IT *Escherichia coli*

(P-fimbriated; carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT Albumins, uses

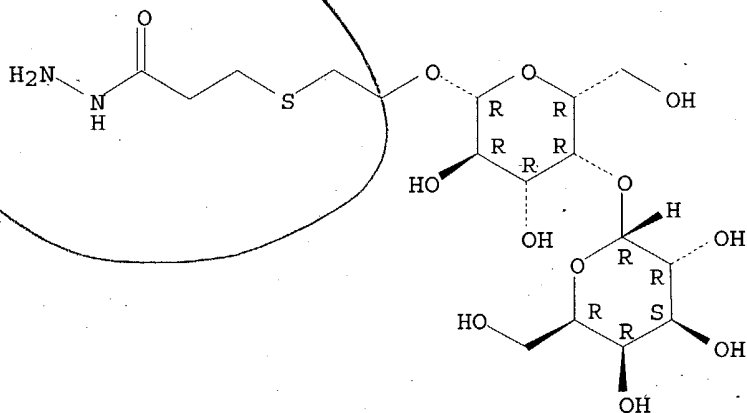
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(bovine, carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT **Biosensors**

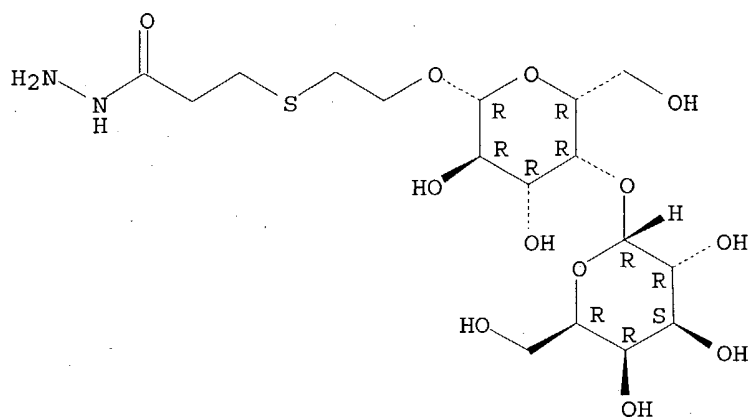
- (carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- IT Carbohydrates and Sugars, uses
RL: DEV (Device component use); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- IT Bacteria
(uropathogenic, carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- IT 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- IT 160294-57-5 160294-57-5D, conjugate with bovine serum albumin
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- IT 160294-57-5 160294-57-5D, conjugate with bovine serum albumin
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)
- RN 160294-57-5 HCAPLUS
CN Propanoic acid, 3-[[2-[(4-O- α -D-galactopyranosyl- β -D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- RN 160294-57-5 HCAPLUS
CN Propanoic acid, 3-[[2-[(4-O- α -D-galactopyranosyl- β -D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L20 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:587593 HCAPLUS

DOCUMENT NUMBER: 111:187593

TITLE: Amine derivatives of anthracycline antibiotics and antibody conjugates thereof and their preparation and use in treatment of cellular disorders

INVENTOR(S): King, Dalton H.; Coughlin, Daniel J.; Rodwell, John Dennis; Lopes, Anthony Dwight; Radcliffe, Robert David

PATENT ASSIGNEE(S): Cytogen Corp., USA

SOURCE: Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

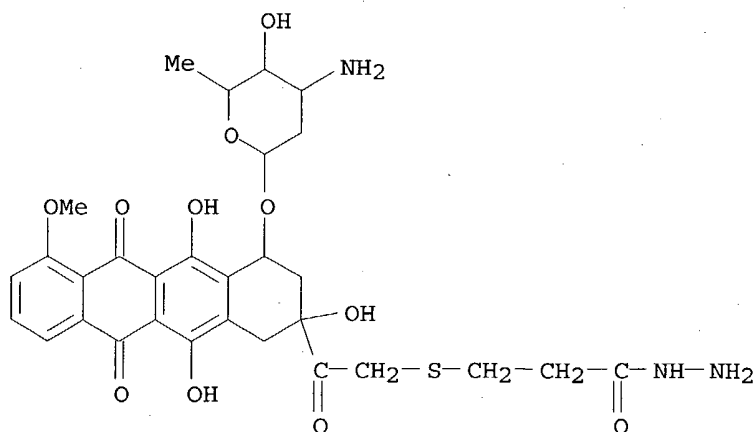
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 294294	A2	19881207	EP 1988-401353	19880603
EP 294294	A3	19900530		
EP 294294	B1	19950517		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 4950738	A	19900821	US 1987-58440	19870605
US 5162512	A	19921110	US 1988-199549	19880527
WO 8809823	A1	19881215	WO 1988-US1909	19880603
W: AU, DK, FI, JP				
AU 8819549	A1	19890104	AU 1988-19549	19880603
ZA 8803956	A	19890222	ZA 1988-3956	19880603
JP 02500749	T2	19900315	JP 1988-505203	19880603
ES 2074055	T3	19950901	ES 1988-401353	19880603
DK 8900511	A	19890203	DK 1989-511	19890203
FI 8900559	A	19890206	FI 1989-559	19890206
PRIORITY APPLN. INFO.:				US 1987-58440 19870605
				US 1988-199549 19880527
				US 1982-356315 19820309
				US 1984-650375 19840913
				US 1984-650754 19840913
				WO 1988-US1909 19880603

OTHER SOURCE(S): MARPAT 111:187593

AB Amine derivs. of antineoplastic anthracycline antibiotics (e.g. hydrazine, hydrazide, phenylhydrazine, etc. derivs. of daunorubicin, doxorubicin,

carminocyan, etc.) are prepared and covalently **attached** to an antibody or antibody fragment for treatment of cellular disorders, especially neoplasms. Adriamycin-HCl was reacted with adipic dihydrazide and the product (ADR-ADH) was conjugated with a murine monoclonal antibody B72.3 specific for an antigen of human adenocarcinoma (the oligosaccharide moiety of the antibody had been oxidized with NaIO₄). Tumor (human colon adenocarcinoma, BL/CX-3) growth in nude mice treated i.v. with 6 µg ADR-ADH-B72.3 conjugate was significantly inhibited compared to the untreated group. The tumor inhibitory effect was equivalent to that seen in animals receiving 200 µg ADR alone. The inhibition lasted beyond the end of the treatment.

IC ICM C07H015-252
ICS A61K031-70; C07K015-00; A61K039-395; A61K047-00
CC 1-6 (Pharmacology)
Section cross-reference(s): 9, 15
IT 23214-92-8DP, pentaglutamylhydrazide derivs., antibody conjugates
123105-65-7DP, antibody conjugates 123105-66-8DP, antibody conjugates
123105-67-9DP, antibody conjugates 123105-68-0DP, antibody conjugates
123105-69-1DP, antibody conjugates 123105-70-4DP, antibody conjugates
123105-71-5DP, antibody conjugates 123105-72-6DP, antibody conjugates
123105-73-7DP, antibody conjugates 123105-74-8DP, antibody conjugates
123105-75-9DP, antibody conjugates 123106-26-3DP, antibody conjugates
123129-58-8DP, antibody conjugates
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as neoplasm inhibitors)
IT **123129-58-8DP, antibody conjugates**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as neoplasm inhibitors)
RN 123129-58-8 HCAPLUS
CN Propanoic acid, 3-[[2-[4-[(3-amino-2,3,6-trideoxy-α-L-lyxo-hexopyranosyl)oxy]-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-2-naphthacenyl]-2-oxoethyl]thio]-, hydrazide, (2S-cis)- (9CI) (CA INDEX NAME)



L20 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:573419 HCAPLUS

DOCUMENT NUMBER: 105:173419

TITLE: Polyurethane ionic polymers with sulfide and semicarbazide groups in the macrochain

AUTHOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR
 SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition)
 (1986), 52(5), 540-3
 CODEN: UKZHAU; ISSN: 0041-6045

DOCUMENT TYPE: Journal
 LANGUAGE: Russian

AB S-containing polyurethane ionenes prepared from polytetramethylene glycol, TDI or MDI, (H₂NNHCO)₂Z [Z= CH₂CH(SR), O(CH₂CH₂SCH₂CH₂)₂; R = alkyl], and (HOCH₂CH₂)₂NMe with subsequent quaternization with HCl and optional alkylation with EtBr or Me₂SO₄ were more UV resistant than their nonsulfur analogs. No changes were observed in tensile strength, elongation, or viscosity after 100-h UV exposure. The photostabilizing influence of S was observed also for the nonquaternized polyurethanes. The S-containing fragments apparently generated weakly active radicals of the type RS·, which were capable of terminating the kinetic chain of degradation

CC 36-5 (Physical Properties of Synthetic High Polymers)

IT 72186-71-1D, quaternized 72186-72-2 72186-72-2D, quaternized
 72186-74-4 72186-74-4D, quaternized 72196-93-1 72196-93-1D,
 quaternized 104935-10-6D, quaternized 104935-11-7D,
 quaternized 104985-03-7 104985-04-8 104985-05-9 104985-06-0
 104985-08-2 104985-09-3 104985-10-6
 RL: PRP (Properties)
 (UV stability of, physicomech. properties in relation to)

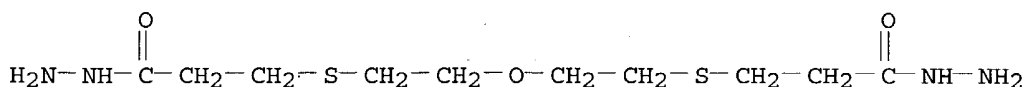
IT 104935-11-7D, quaternized 104985-08-2
 104985-09-3 104985-10-6
 RL: PRP (Properties)
 (UV stability of, physicomech. properties in relation to)

RN 104935-11-7 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide,
 polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and
 2,2'-(methyylimino)bis[ethanol] (9CI) (CA INDEX NAME)

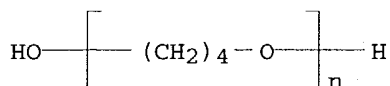
CM 1

CRN 92268-36-5
 CMF C10 H22 N4 O3 S2



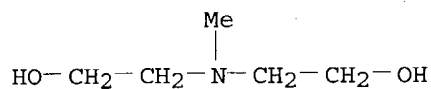
CM 2

CRN 25190-06-1
 CMF (C₄ H₈ O)_n H₂ O
 CCI PMS



CM 3

CRN 105-59-9
CMF C5 H13 N O2



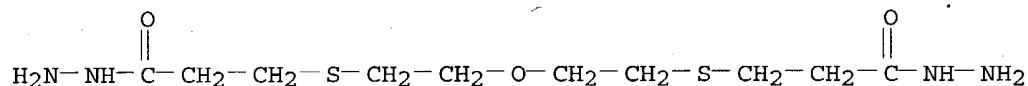
RN 104985-08-2 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methyylimino)bis[ethanol], hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 104985-07-1
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x
CCI PMS

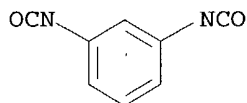
CM 2

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



CM 3

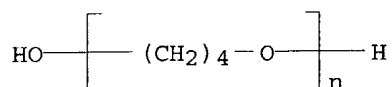
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

CM 4

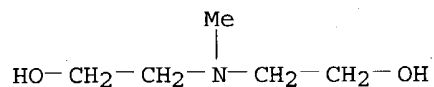
CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 5

CRN 105-59-9

CMF C5 H13 N O2



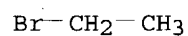
RN 104985-09-3 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanedithio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol], compd. with bromoethane, hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 74-96-4

CMF C2 H5 Br



CM 2

CRN 104985-07-1

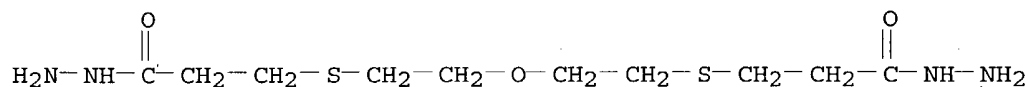
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x

CCI PMS

CM 3

CRN 92268-36-5

CMF C10 H22 N4 O3 S2

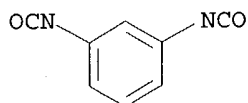


CM 4

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



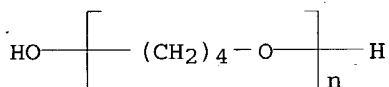
D1-- Me

CM 5

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

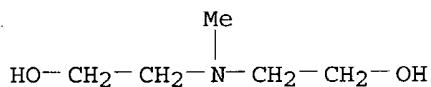
CCI PMS



CM 6

CRN 105-59-9

CMF C5 H13 N O2



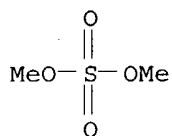
RN 104985-10-6 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol], compd. with dimethyl sulfate, hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 77-78-1

CMF C2 H6 O4 S



CM 2

CRN 104985-07-1

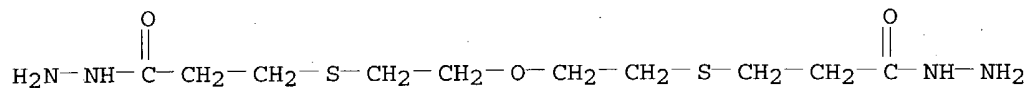
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x

CCI PMS

CM 3

CRN 92268-36-5

CMF C10 H22 N4 O3 S2

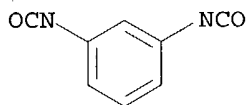


CM 4

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



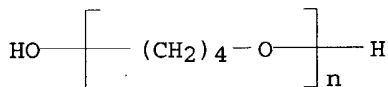
D1-Me

CM 5

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

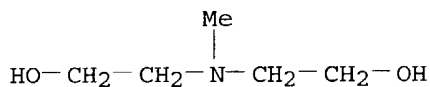
CCI PMS



CM 6

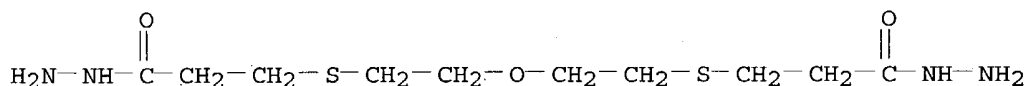
CRN 105-59-9

CMF C5 H13 N O2



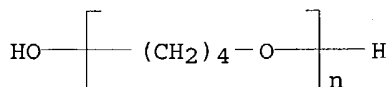
L20 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1986:169828 HCAPLUS

DOCUMENT NUMBER: 104:169828
 TITLE: Effect of UV irradiation on sulfur-containing poly(urethane semicarbazide)s
 AUTHOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.; Fedorenko, O. M.
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Moscow, USSR
 SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1986), 28(1), 111-16
 CODEN: VYSAAF; ISSN: 0507-5475
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB S-containing polyurethane-polysemicarbazide (PUS) rubbers prepared from polytetramethylene glycol, MDI, and thiodicarboxylic acid dihydrazides, containing a sulfide group in the main chain or in a side group were more stable to UV degradation than similar polyurethanes not containing semicarbazide or S groups. The stabilizing influence of the semicarbazide groups was attributed to its antioxidant activity resulting from the presence of replaceable H atoms. The S-containing fragments stabilized through formation of RS radicals capable of terminating the kinetic chain of degradation. Photodegrdn. of the S-containing PUS occurred only in the first 5-10 h of irradiation, after which the mech. properties increased in value then became constant with further irradiation
 CC 39-7 (Synthetic Elastomers and Natural Rubber)
 IT 9018-04-6 52484-70-5 95410-92-7 95410-93-8 101909-11-9
 101909-12-0 101909-13-1 **101909-14-2**
 RL: PRP (Properties)
 (stability of, to photodegrdn. by UV irradiation, structure in relation to)
 IT **101909-14-2**
 RL: PRP (Properties)
 (stability of, to photodegrdn. by UV irradiation, structure in relation to)
 RN 101909-14-2 HCAPLUS
 CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)
 CM 1
 CRN 92268-36-5
 CMF C10 H22 N4 O3 S2



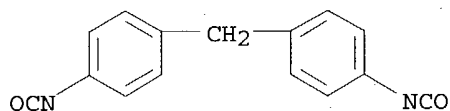
CM 2

CRN 25190-06-1
 CMF (C4 H8 O)_n H2 O
 CCI PMS



CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



L20 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:168202 HCAPLUS

DOCUMENT NUMBER: 102:168202

TITLE: Flexible polyurethanes

INVENTOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.;
Tanchuk, Yu. V.; Kornienko, A. A.

PATENT ASSIGNEE(S): Institute of the Chemistry of High-Molecular-Weight
Compounds, Academy of Sciences, Ukrainian S.S.R., USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1984, (48), 88-9.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1131886	A1	19841230	SU 1983-3587911	19830309

PRIORITY APPLN. INFO.: SU 1983-3587911 19830309

AB Flexible polyurethanes are prepared by reacting oligoesters and diisocyanates and then adding chain extenders at a mol. ratio of oligomers/diisocyanates/chain extenders of 1:2-2.2:0.9-1.2. The UV light and low-temperature resistance of the polyurethanes is increased by using as a chain extender 1,5-diethylene oxide-S,S'-bis(mercaptopropionic acid) dihydrazide have the formula $H_2NHNCOCH_2CH_2-S-CH_2CH_2-O-CH_2CH_2-S-CH_2CH_2CONHNH_2$.

IC ICM C08G018-38

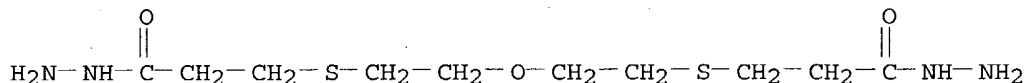
CC 39-12 (Synthetic Elastomers and Natural Rubber)

IT 92268-36-5DP, polymers with polyesters and diisocyanates
RL: PREP (Preparation)
(oligomeric, rubber, manufacture of, light-and low-temperature-resistant)

IT 92268-36-5DP, polymers with polyesters and diisocyanates
RL: PREP (Preparation)
(oligomeric, rubber, manufacture of, light-and low-temperature-resistant)

RN 92268-36-5 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide (9CI)
(CA INDEX NAME)



L20 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:552748 HCAPLUS

DOCUMENT NUMBER: 101:152748

TITLE: Thermal stability of sulfur-containing polyurethane semicarbazides

AUTHOR(S): Grekov, A. P.; Navrotskaya, R. P.; Zapunnaya, K. V.; Sukhorukova, S. A.; Fedorenko, O. M.

CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR

SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1984), 50(6), 659-63

CODEN: UKZHAU; ISSN: 0041-6045

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Thermogravimetric anal., DTA, and IR spectroscopy was used to study the thermal properties of polyurethane semicarbazides (PUS) containing sulfide groups in the main or side chains, and the effect of sulfide fragments of dicarboxylic dihydrazides on the thermal stability (TS) of PUS. The PUS were prepared from oligomeric polytetramethylene glycol, TDI, and different dihydrazides in DMF solns. The oxidative TS of PUS was significantly higher than that of polyurethanes. The degradation activation energy (Ea) PUS was 106-325 kJ/mol of 240-510°. The highest Ea (325.1 kJ/mol) was observed for PUS with SC14H29 groups of the succinic dihydrazide. The TS of PUS depends on the chemical structure of the hydrazide, and especially on the structure of S-containing fragments.

CC 37-5 (Plastics Manufacture and Processing)

IT 90967-18-3 92268-33-2 92268-34-3 92268-35-4 92268-37-6

RL: USES (Uses)

(thermal and oxidative thermal stability of)

IT 92268-37-6

RL: USES (Uses)

(thermal and oxidative thermal stability of)

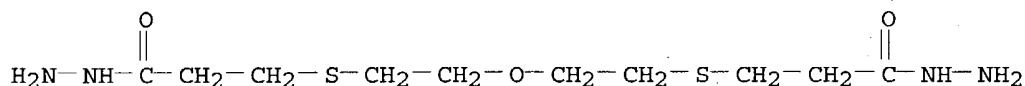
RN 92268-37-6 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 92268-36-5

CMF C10 H22 N4 O3 S2

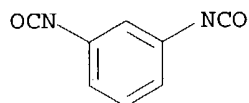


CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

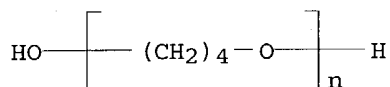
CCI IDS



D1—Me

CM 3

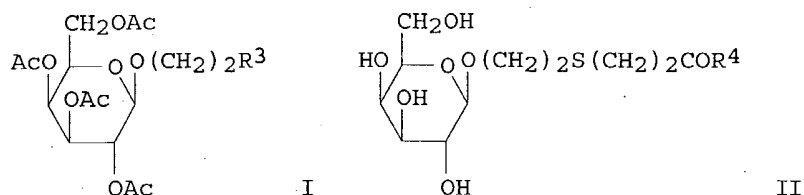
CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



L20 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:423882 HCAPLUS
DOCUMENT NUMBER: 101:23882
TITLE: Glycosides and glycoconjugates
INVENTOR(S): Dahmen, Jan; Frejd, Torbjoern; Magnusson, Goeran;
Noori, Ghazi
PATENT ASSIGNEE(S): Svenska Sockerfabriks AB, Swed.
SOURCE: Eur. Pat. Appl., 112 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 98252	A2	19840111	EP 1983-850176	19830621
EP 98252	A3	19840404		
EP 98252	B1	19890607		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
FI 8302254	A	19831224	FI 1983-2254	19830620
FI 78707	B	19890531		
FI 78707	C	19890911		
DK 8302842	A	19831224	DK 1983-2842	19830620
AT 43847	E	19890615	AT 1983-850176	19830621
JP 59025399	A2	19840209	JP 1983-111989	19830623
US 4675392	A	19870623	US 1984-673796	19841121
PRIORITY APPLN. INFO.:			SE 1982-3925	19820623
			US 1983-504154	19830614
			EP 1983-850176	19830621

GI



AB Glycosides of the general formula (sugar) n O(CH $_2$) m SRR1 [n = 1-10; m = 2-20; R = alkylene of ≤ 25 C atoms, arylene; R1 = H, CHO, NO $_2$, NH $_2$, OH, SH, CO $_2$ H, CO $_2$ Me, CO $_2$ Et, CONHNH $_2$, CON $_3$, CH(OR $_2$) $_2$, (R $_2$ = C1-4 alkyl)] were prepared and some of them were converted into glycoconjugates. Thus, glycoside I (R $_3$ = Br), prepared from HO(CH $_2$) $_2$ Br and the corresponding sugar peracetate, was treated with HS(CH $_2$) $_2$ CO $_2$ Me to give I [R $_3$ = S(CH $_2$) $_2$ CO $_2$ Me]. The latter was deacetylated to give glycoside II (R $_4$ = OMe), which was treated with H $_2$ NNH $_2$ to give II (R $_4$ = NHNH $_2$), which was coupled to bovine serum albumin by the acyl azide method to give the corresponding conjugate II (R $_4$ = bovine serum albumin).

IC C07H015-04; C07H003-06; C07H003-04; C07G007-00; C07G017-00
CC 33-3 (Carbohydrates)

Section cross-reference(s): 6

IT 90214-63-4P 90214-66-7P 90214-86-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and coupling of, with albumin)

IT 90214-63-4P 90214-66-7P 90214-86-1P

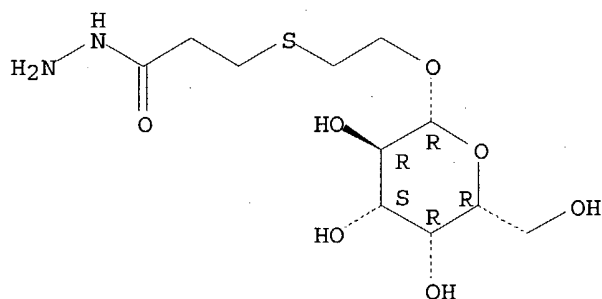
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and coupling of, with albumin)

RN 90214-63-4 HCAPLUS

CN Propanoic acid, 3-[[2-(β -D-galactopyranosyloxy)ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

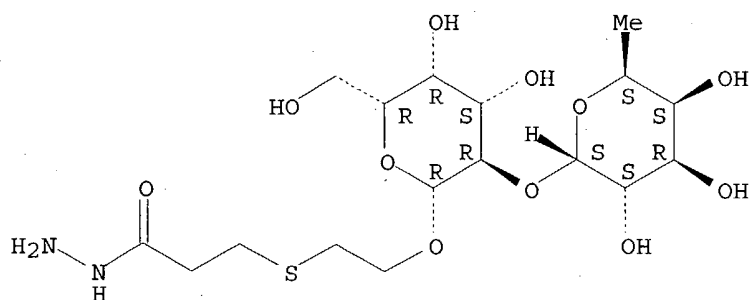
Absolute stereochemistry.



RN 90214-66-7 HCAPLUS

CN Propanoic acid, 3-[[2-[[2-O-(6-deoxy- α -L-galactopyranosyl)- β -D-galactopyranosyl]oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

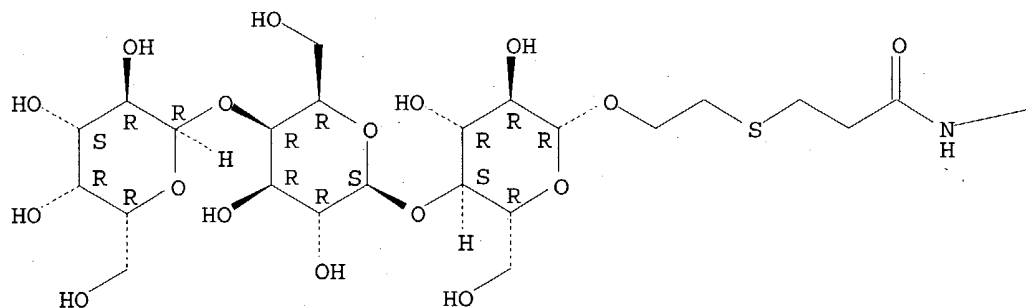


RN 90214-86-1 HCAPLUS

CN Propanoic acid, 3-[[2-[(O- α -D-galactopyranosyl-(1 \rightarrow 4)-O- β -D-galactopyranosyl-(1 \rightarrow 4)- β -D-glucopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—NH₂

L20 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:41138 HCAPLUS

DOCUMENT NUMBER: 94:41138

TITLE: Studies on structure-activity relation of TAPHA-type compounds as monoamine oxidase inhibitors

AUTHOR(S): Wang, Yu-Ee; Xu, Fu-Ben; Chen, Chi-Hao; Jin, Guo-Zhang

CORPORATE SOURCE: Shanghai Inst. Mater. Med., Acad. Sin., Shanghai, Peop. Rep. China

SOURCE: Yaoxue Xuebao (1980), 15(3), 147-52

CODEN: YHHPAL; ISSN: 0513-4870

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The title compds. X[(CH₂)_nCONHNHR]₂ I (R = CHMe₂, Bu, CH₂Ph, CH₂CH₂Ph, etc.; X = O, S, OCH₂CH₂O, RN; n = 1 or 2) were evaluated as monoamine oxidase [9001-66-5] inhibitors. The ED₅₀ and LD₅₀ of several compds. in

mice is given. I (R = Bu, X = S, n = 2) [1001-39-4] had the lowest ED50 (2 mg/kg) and TAPHA [I (R = CHMe2, X = S, n = 2)] [1689-03-8] was the least toxic. Structure-activity relations are discussed.

CC 1-3 (Pharmacodynamics)

Section cross-reference(s): 7

IT 999-25-7 999-27-9 999-45-1 1001-28-1 1001-35-0 1001-37-2
 1001-38-3 1001-39-4 1001-41-8 1001-85-0 1027-27-6 1030-58-6
 1033-66-5 1050-21-1 1054-53-1 1054-54-2 1057-51-8 1070-55-9
 1070-56-0 1071-54-1 1071-61-0 1071-68-7 1100-68-1 1100-69-2
 1102-36-9 1103-69-1 1103-72-6 1105-57-3 1190-60-9 1241-05-0
 1248-93-7 1250-79-9 1689-03-8 6292-68-8 6292-69-9 75487-18-2
 75487-19-3 75487-20-6 75487-21-7 75487-22-8 75487-23-9
 75487-24-0 75487-25-1 75487-26-2 75487-27-3 75487-28-4
 75487-29-5 75487-30-8 75487-31-9 75487-32-0 75499-16-0

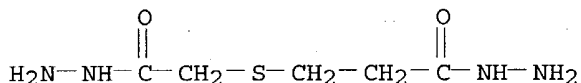
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (monoamine oxidase-inhibiting activity of)

IT 75487-20-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (monoamine oxidase-inhibiting activity of)

RN 75487-20-6 HCAPLUS

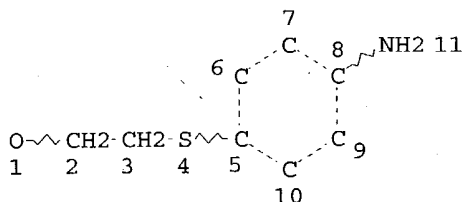
CN Propanoic acid, 3-[(2-hydrazino-2-oxoethyl)thio]-, hydrazide (9CI) (CA INDEX NAME)



=> d que

L15

STR

-O Et SPH NH₂

and biosensor

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L17 166 SEA FILE=REGISTRY SSS FUL L15

L21 12343 SEA FILE=HCAPLUS ABB=ON PLU=ON BIOSENSORS/CT

L25 847 SEA FILE=HCAPLUS ABB=ON PLU=ON L17

L28 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (L21 OR BIOSENS? OR
BIO?(5A)?SENSOR? OR BIOCHIP?)

=> d ibib abs hitind hitstr

L28 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:424393 HCAPLUS

DOCUMENT NUMBER: 127:158681

TITLE: Synthesis of a surface-active polyamic acid with
pendant biological linker molecule for specific
immobilization of antibodies

AUTHOR(S): Watson, Hazel; Peltonen, Jouko

CORPORATE SOURCE: Department of Physical Chemistry, Abo Akademi
University, Porthansgatan 3-5, FIN-20500, Turku,
FinlandSOURCE: Sensors and Actuators, B: Chemical (1997), B39(1-3),
261-265

CODEN: SABCEB; ISSN: 0925-4005

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The characterization of a novel amphiphilic polyamic acid derivative intended for use in biosensor applications is reported. The surface-active polymer, synthesized from a modified diamine and 1,2,4,5-benzenetetracarboxylic dianhydride (pyromellitic dianhydride), comprises a polymer backbone with pendant functional groups, capable of specific immobilization of antibodies. The polymer is rendered amphiphilic by reaction with octadecylamine in a stoichiometric ratio of 1:2, i.e., equimolar ratios of acid and amine functionality. The Langmuir monolayer is expected to be capable of specifically and effectively immobilizing antibody fragments introduced into the subphase. Anal. of the chemical structure of the polymer mol. of various mol. wts. and characterization of the monolayer are presented.

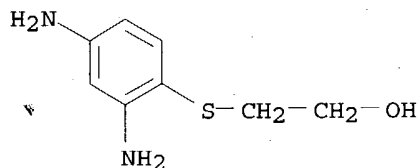
CC 9-10 (Biochemical Methods)

Section cross-reference(s): 15
ST polymer immobilization antibody **biosensor**
IT **Biosensors**
Immobilization
Langmuir films
(synthesis of surface-active polyamic acid with pendant biol. linker
mol. for specific immobilization of antibodies)
IT **193539-15-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with octadecylamine)
IT **193539-18-3P**
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
BIOL (Biological study); PREP (Preparation)
(preparation and use in **biosensor** preparation for antibody
immobilization)
IT **193539-13-8P**
RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic
preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant
or reagent); USES (Uses)
(preparation as linker mol. in **biosensor** preparation for antibody
immobilization)
IT **96727-40-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyromellitic anhydride)
IT **193539-15-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction with octadecylamine)
RN 193539-15-0 HCAPLUS
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with
2-[(2,4-diaminophenyl)thio]ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 96727-40-1

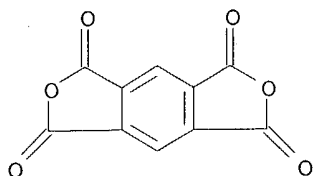
CMF C8 H12 N2 O S



CM 2

CRN 89-32-7

CMF C10 H2 O6



IT 193539-18-3P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
 BIOL (Biological study); PREP (Preparation)
 (preparation and use in **biosensor** preparation for antibody
 immobilization)

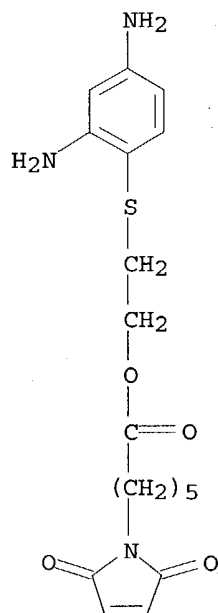
RN 193539-18-3 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with
 2-[(2,4-diaminophenyl)thio]ethyl 2,5-dihydro-2,5-dioxo-1H-pyrrole-1-
 hexanoate (9CI) (CA INDEX NAME)

CM 1

CRN 193539-17-2

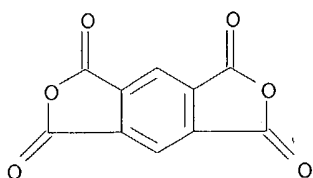
CMF C18 H23 N3 O4 S



CM 2

CRN 89-32-7

CMF C10 H2 O6



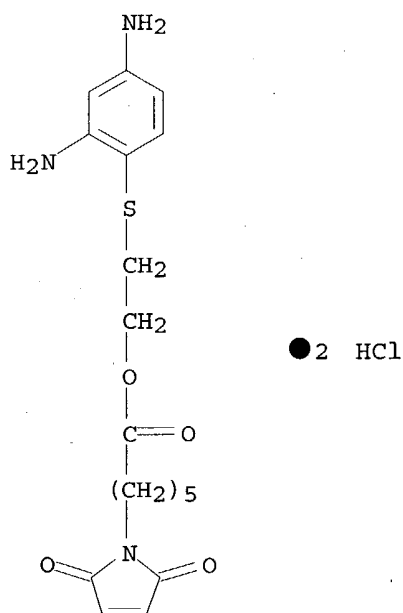
IT 193539-13-8P

RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation as linker mol. in **biosensor** preparation for antibody immobilization)

RN 193539-13-8 HCAPLUS

CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 2-[(2,4-diaminophenyl)thio]ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

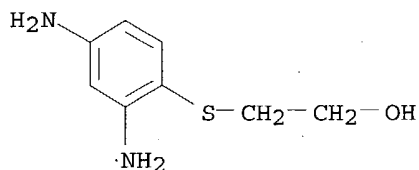


IT 96727-40-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyromellitic anhydride)

RN 96727-40-1 HCAPLUS

CN Ethanol, 2-[(2,4-diaminophenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

15

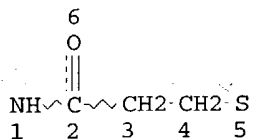
THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

Cheu 09/766,659

May 21, 2004

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 STR

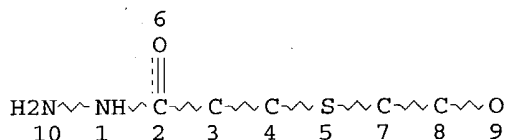


NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

AND Biosensor

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
 L8 9777 SEA FILE=REGISTRY SSS FUL L5
 L9 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
 L10 17 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
 L18 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
 L19 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND (IMMOBIL? OR COAT? OR ATTACH? OR BIOSENS? OR BIOCHIP? OR BIO?(2A)?SENS?)
 L20 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L19
 L21 12343 SEA FILE=HCAPLUS ABB=ON PLU=ON BIOSENSORS/CT
 L22 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND L8
 L23 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND ?CARBOHYDR?
 L24 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 NOT L20

=> d 124 ibib abs hitind hitstr 1-6)

L24 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:555756 HCAPLUS
 DOCUMENT NUMBER: 137:121864
 TITLE: Biosensor with covalently attached membrane-spanning proteins
 INVENTOR(S): Lakey, Jeremy Hugh
 PATENT ASSIGNEE(S): Newcastle University Ventures Limited, UK
 SOURCE: PCT Int. Appl., 52 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

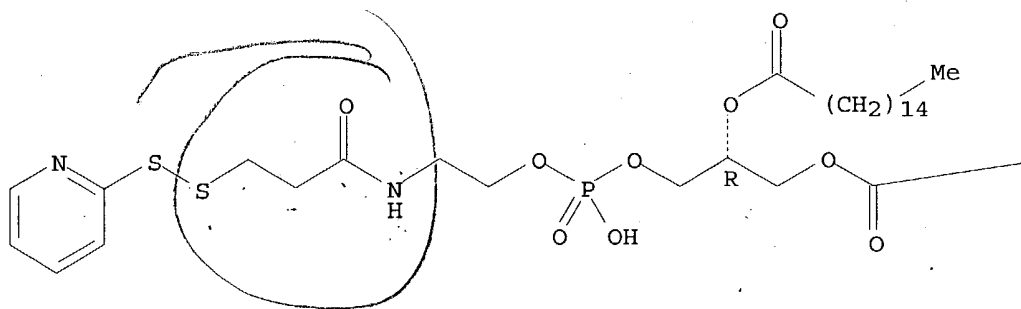
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057780	A1	20020725	WO 2002-GB222	20020118
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1352245	A1	20031015	EP 2002-732154	20020118
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004096895	A1	20040520	US 2003-250682	20031017
PRIORITY APPLN. INFO.:				
			GB 2001-1279	A 20010118
			GB 2001-8947	A 20010410
			WO 2002-GB222	W 20020118
AB	The invention concerns a product comprising: a membrane-spanning protein; a lipid membrane formed from amphiphilic mols. and membrane-spanning protein mols.; and a substrate: characterized in that the membrane protein is directly coupled to the substrate. The invention also provides a method for producing such a product which (i) comprises treating a substrate with a hydrophilic coating agent; (ii) providing at least one membrane-spanning protein; (iii) bringing the protein into contact with the treated substrate under conditions for the coupling of the protein directly to the treated substrate; (iv) adding amphiphilic mols. to the protein-coupled substrate to form a lipid membrane. The product is useful for biosensors, protein arrays and the like.			
IC	ICM G01N033-543			
CC	ICS C12Q001-00; G01N027-333			
IT	9-1 (Biochemical Methods). Section cross-reference(s): 6 Actinobacillus pleuropneumoniae Aeromonas Aeromonas salmonicida Amphiphiles Antibiotics Aquifex aeolicus Bartonella bacilliformis Biosensors Bordetella avium Bordetella pertussis Borrelia burgdorferi Brucella Brucella melitensis Burkholderia cepacia Calymmatobacterium granulomatis Chlamydia Chlamydia trachomatis Chlamydomonas pneumoniae Citrobacter freundii Coating materials			

Comamonas acidovorans
Drugs
Ectothiorhodospira vacuolata
Eikenella corrodens
Enterobacter aerogenes
Enterobacter cloacae
Escherichia
Escherichia coli
Escherichia fergusonii
Escherichia hermannii
Escherichia vulneris
Genetic methods
Haemophilus
Haemophilus actinomycetemcomitans
Haemophilus ducreyi
Haemophilus influenzae
Haemophilus parainfluenzae
Helicobacter pylori
Histophilus somni
Hydrophilicity
Immobilization, molecular or cellular
Ionophores
Klebsiella oxytoca
Klebsiella pneumoniae
Legionella pneumophila
Leptothrix discophora
Mannheimia haemolytica
Methylococcus capsulatus
Moraxella catarrhalis
Mutation
Neisseria flavescens
Neisseria gonorrhoeae
Neisseria lactamica
Neisseria meningitidis
Neisseria polysaccharea
Neisseria sicca
Pasteurella multocida
Pesticides
Photobacterium profundum
Pseudomonas aeruginosa
Pseudomonas fluorescens
Pseudomonas putida
Pseudomonas syringae
Rahnella aquatilis
Rhodobacter blasticus
Rhodobacter capsulatus
Rickettsia prowazeki
Salmonella typhi
Salmonella typhimurium
Self-assembled monolayers
Serratia marcescens
Serratia odorifera
Shigella
Siler
Sinorhizobium meliloti
Siphoviridae
Sulfhydryl group
Thermotoga maritima
Treponema pallidum

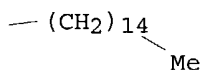
Treponema phagedenis
 Vibrio alginolyticus
 Vibrio cholerae
 Vibrio parahaemolyticus
 Xenorhabdus nematophila
 Yersinia enterocolitica
 Yersinia pestis
 α -Helix
 β -Barrel
 (biosensor with covalently attached membrane-spanning proteins)
 IT Amino acids, analysis
 Antibodies
 Carbohydrates, analysis
 DNA
 Fatty acids, analysis
 Hormones, animal, analysis
 Ligands
 Nucleic acids
 Peptide nucleic acids
 RNA
 Receptors
 Steroids, analysis
 cDNA
 RL: ANT (Analyte); ANST (Analytical study)
 (biosensor with covalently attached membrane-spanning proteins)
 IT 52-90-4, Cysteine, properties 87707-01-5 102281-30-1
 186133-87-9 202529-31-5 443299-05-6
 RL: PRP (Properties)
 (biosensor with covalently attached membrane-spanning proteins)
 IT 87707-01-5 186133-87-9
 RL: PRP (Properties)
 (biosensor with covalently attached membrane-spanning proteins)
 RN 87707-01-5 HCAPLUS
 CN Hexadecanoic acid, (1R)-1-[3-hydroxy-3-oxido-8-oxo-10-(2-pyridinyldithio)-
 2,4-dioxa-7-aza-3-phosphadec-1-yl]-1,2-ethanediyl ester (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

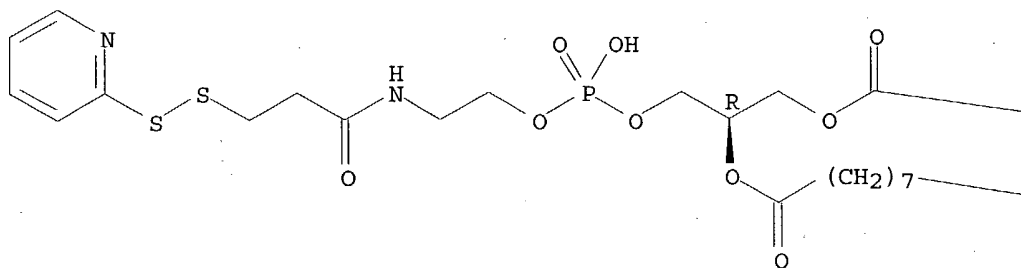


RN 186133-87-9 HCAPLUS

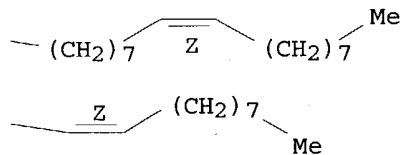
CN 9-Octadecenoic acid (9Z)-, (1R)-1-[3-hydroxy-3-oxido-8-oxo-10-(2-pyridinyldithio)-2,4-dioxo-7-aza-3-phosphadec-1-yl]-1,2-ethanediyl ester
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:731334 HCAPLUS

DOCUMENT NUMBER: 135:269619

TITLE: Colorimetric glycopolythiophene biosensors

INVENTOR(S): Charych, Deborah J.; Myung-Gi-Baek, Deborah J.

PATENT ASSIGNEE(S): The Regents of the University of California, USA

SOURCE: U.S. Pat. Appl. Publ., 38 pp., Cont.-in-part of U.S.
Ser. No. 461,509.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001026915	A1	20011004	US 2000-734410	20001211
US 6660484	B2	20031209		
US 6001556	A	19991214	US 1996-592724	19960126
US 6183772	B1	20010206	US 1996-609312	19960301
US 6022748	A	20000208	US 1997-920501	19970829
US 6080423	A	20000627	US 1997-944257	19971006
US 6180135	B1	20010130	US 1997-944323	19971006
US 6468759	B1	20021022	US 1998-33557	19980302
US 6306598	B1	20011023	US 1999-337973	19990621
US 6395561	B1	20020528	US 1999-461509	19991214
US 6485987	B1	20021126	US 2000-500295	20000208

PRIORITY APPLN. INFO.:

US 1992-976697	B2	19921113
US 1993-159927	B2	19931130
US 1994-289384	B2	19940811
US 1994-328237	B2	19941024
US 1995-389475	B2	19950213
US 1998-23898	B3	19950213
US 1996-592724	A3	19960126
US 1996-609312	A2	19960301
US 1997-38383P	P	19970214
US 1997-39749P	P	19970303
US 1997-50496P	P	19970623
US 1997-920501	A3	19970829
US 1997-944323	A2	19971006
US 1998-33557	A2	19980302
US 1998-103344	A2	19980623
US 1999-337973	A2	19990621
US 1999-170190P	P	19991210
US 1999-461509	A2	19991214
US 2000-500295	A2	20000208
US 1992-982189	B2	19921125
US 1997-944257	A3	19971006
US 1998-90266P	P	19980622

AB The present invention relates to methods and compns. for the direct detection of analytes using observable spectral changes in biopolymeric systems. In particular, the present invention allows for the direct colorimetric detection of analytes using color changes that occur in glycopolythiophene polymer systems in response to selective binding of analytes.

IC C12Q001-70; G01N033-554; G01N033-569; A61L002-00; B32B027-04

NCL 435005000

CC 9-1 (Biochemical Methods)

IT Agglutinins and Lectins

Antibodies

Antigens

Biopolymers

Carbohydrates, uses

Cardiolipins

Ceramides

Cerebrosides

Enzymes, uses

Gene

Hormones, animal, uses

Ligands

Lysophosphatidylcholines

Nucleic acids

Phosphatidic acids

Phosphatidylcholines, uses

Phosphatidylethanolamines, uses

Phosphatidylglycerols

Phosphatidylinositols

Phosphatidylserines

Polymers, uses

Polyoxyalkylenes, uses

Proteins, general, uses

Receptors

Sialic acids

Sphingomyelins

Steroids, uses

Trisaccharides

Volatile organic compounds

RL: ARG (Analytical reagent use); DEV (Device component use); ANST
(Analytical study); USES (Uses)

(colorimetric glycopolythiophene biosensors)

IT Biosensors

(colorimetric glycopolythiophene; colorimetric glycopolythiophene biosensors)

IT 56-12-2, 4-Aminobutanoic acid, reactions 60-32-2, 6-Aminocaproic acid
107-15-3, Ethylenediamine, reactions 373-44-4, 1,8-Octanediamine
4781-83-3, 2-Iminothiolane hydrochloride 6066-82-6, n-Hydroxysuccinimide
6964-21-2, Thiophene-3-acetic acid 7087-68-5, Diisopropylethylamine
7719-09-7, thionyl chloride 34213-86-0 39001-23-5 58414-52-1
69492-74-6, Thiophene acetic acid 88829-82-7 125700-67-6, Tbtu
187146-99-2 187147-00-8 363620-44-4 **363620-46-6**
363620-47-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(colorimetric glycopolythiophene biosensors)

IT 81253-66-9P 114815-74-6P 321850-00-4P 321850-01-5P 321850-02-6P
321850-03-7P 321850-40-2P 321850-42-4P 321850-44-6P 363620-33-1P
363620-35-3P 363620-37-5P **363620-39-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(colorimetric glycopolythiophene biosensors)

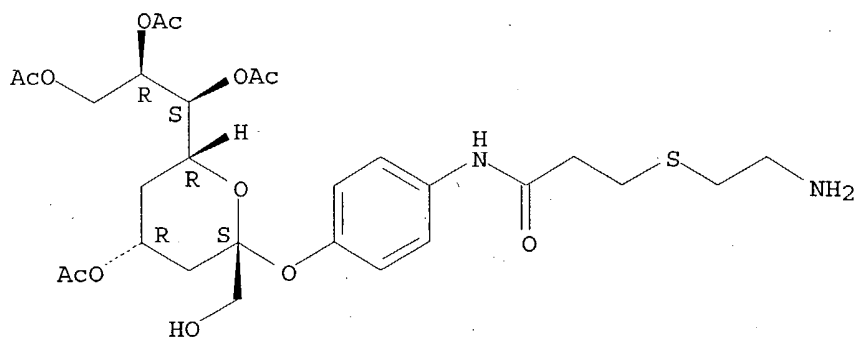
IT 363620-46-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(colorimetric glycopolythiophene biosensors)

RN 363620-46-6 HCAPLUS

CN Propanamide, 3-[(2-aminoethyl)thio]-N-[4-[(4,7,8,9-tetra-O-acetyl-3,5-dideoxy- α -D-glucopyranosyl)oxy]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 363620-39-7P

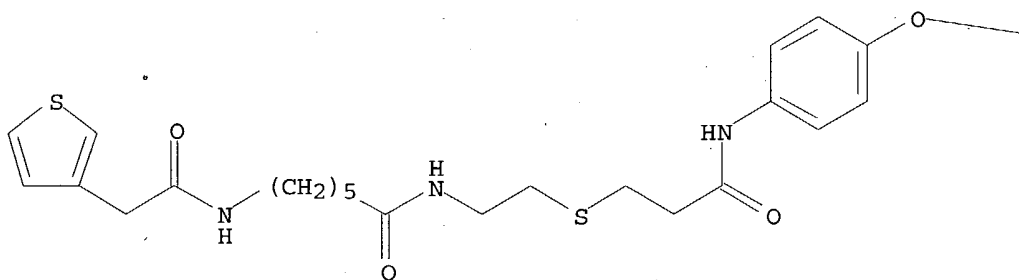
RL: SPN (Synthetic preparation); PREP (Preparation)
(colorimetric glycopolythiophene biosensors)

RN 363620-39-7 HCAPLUS

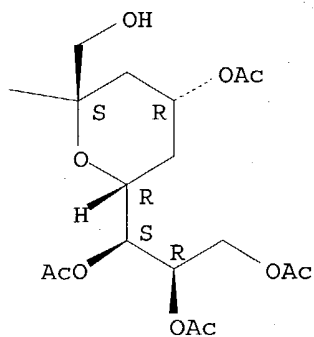
CN 3-Thiopheneacetamide, N-[6-oxo-6-[[2-[[3-oxo-3-[[4-[(4,7,8,9-tetra-O-acetyl-3,5-dideoxy- α -D-glucopyranosyl)oxy]phenyl]amino]propyl]thio]ethyl]amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 1-B



L24 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:421409 HCAPLUS
 DOCUMENT NUMBER: 133:40210
 TITLE: Patterned deposition of antibody-binding proteins for optical diffraction-based biosensors
 INVENTOR(S): McGrath, Kevin; Kaylor, Rosann M.; Everhart, Dennis S.
 PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000036416	A1	20000622	WO 1999-US27727	19991122
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001055754	A1	20011227	US 1998-213713	19981217
US 6579673	B2	20030617		
EP 1141709	A1	20011010	EP 1999-960563	19991122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 762900	B2	20030710	AU 2000-17431	19991122
PRIORITY APPLN. INFO.: US 1998-213713 A 19981217				
WO 1999-US27727 W 19991122				

AB The present invention provides an inexpensive and sensitive device and method for detecting and quantifying analytes present in a medium. The device comprises a metalized film upon which is printed a specific, predetd. pattern of an antibody-binding protein. Upon attachment of a target analyte to select areas of the plastic film upon which the protein is printed, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. An immunosensor for LH had immobilized protein A printed on a gold/Mylar film. The sensor was reacted with monoclonal antibody to LH β .

IC ICM G01N033-543

ICS G01N021-47

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 2, 15

IT **Biosensors**

(immunol., optical, for LH; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT **Biosensors**

(immunosensors, optical, for LH; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT Bacteria (Eubacteria)

Biosensors

Candida

Cellophane

Drugs

Drugs of abuse
Environmental analysis
Escherichia coli
Films
Fungi
Microspheres
Optical diffraction
Salmonella
Streptococcus pneumoniae
Virus
Yeast

(patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT Allergens
Antibodies
Carbohydrates, analysis
Carcinoembryonic antigen
Enzymes, analysis
Haptens
Hormones, animal, analysis
Lipids, analysis
Nucleic acids
Polysaccharides, analysis
Proteins, general, analysis
Rheumatoid factors

RL: ANT (Analyte); ANST (Analytical study)

(patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT 150244-18-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(thiolation with; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

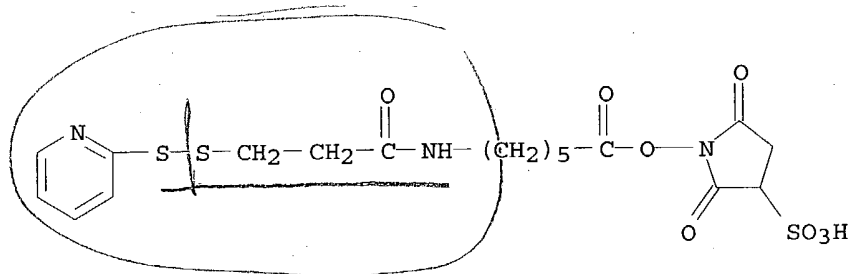
IT 150244-18-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(thiolation with; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

RN 150244-18-1 HCAPLUS

CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[[1-oxo-6-[[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:402097 HCAPLUS

DOCUMENT NUMBER: 133:40221

TITLE: Patterned binding of functionalized microspheres for optical diffraction-based biosensors

INVENTOR(S): Everhart, Dennis S.; Kaylor, Rosann M.; McGrath, Kevin

PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034781	A2	20000615	WO 1999-US27671	19991122
WO 2000034781	A3	20000817		
W:				
AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,				
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,				
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,				
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,				
BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,				
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6221579	B1	20010424	US 1998-210016	19981211
EP 1137942	A2	20011004	EP 1999-961755	19991122
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO				
AU 759582	B2	20030417	AU 2000-18271	19991122
US 2001004526	A1	20010621	US 2000-733204	20001208
US 6573040	B2	20030603		

PRIORITY APPLN. INFO.: US 1998-210016 A 19981211
 WO 1999-US27671 W 19991122

AB The present invention provides an inexpensive and sensitive system and method for detecting analytes present in a medium. The system comprises a diffraction enhancing element, such as functionalized microspheres, which are modified such that they are capable of binding with a target analyte. Addnl., the system comprises a polymer film, which may include a metal coating, upon which is printed a specific, predetd. pattern of analyte-specific receptors. Upon attachment of a target analyte to select areas of the polymer film, either directly or with the diffraction enhancing element, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. Blue polystyrene particles were conjugated with monoclonal antibody. A gold/Mylar film was blocked with β -casein and then antibody was immobilized in a pattern on the surface. LH sample was mixed with the microparticles and then applied to the sensor. A nitrocellulose disk with a small hole in the center was used to wick away excess fluid and unbound microparticles. A point light source was transmitted through the hole and sensor to create a diffraction image on the other side.

IC ICM G01N033-53

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 2, 3, 15

IT Biosensors

(immunol., optical, for LH; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT Biosensors

(immunosensors, optical, for LH; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT Bacteria (Eubacteria)

Biosensors

Candida albicans
 Cellophane
 Chelating agents
 Drugs
 Drugs of abuse
 Environmental analysis
 Escherichia coli
 Films
 Fungi
 Microspheres
 Optical diffraction
 Scanning electron microscopy
 Streptococcus pneumoniae
 Surfactants
 Virus
 Yeast

(patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT Antibodies

Antigens

Carbohydrates, analysis

Enzymes, analysis

Hormones, animal, analysis

Lipids, analysis

Nucleic acids

Polysaccharides, analysis

Proteins, general, analysis

RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)

(patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT 150244-18-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(thiolation with; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

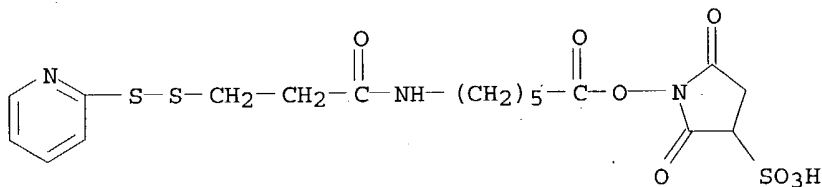
IT 150244-18-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(thiolation with; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

RN 150244-18-1 HCAPLUS

CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[1-oxo-6-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxy]- (9CI) (CA INDEX NAME)



L24 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:405159 HCAPLUS

DOCUMENT NUMBER: 131:41789

TITLE: Optical diffraction biosensor

INVENTOR(S): Everhart, Dennis S.; Jones, Mark L.; Kaylor, Rosann Marie
 PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
 SOURCE: PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9931486	A1	19990624	WO 1998-US26759	19981216
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6060256	A	20000509	US 1997-991644	19971216
CA 2309595	AA	19990624	CA 1998-2309595	19981216
AU 9919205	A1	19990705	AU 1999-19205	19981216
AU 760500	B2	20030515		
EP 1040338	A1	20001004	EP 1998-963991	19981216
R: BE, DE, ES, FR, GB, IT, NL, SE				
US 6436651	B1	20020820	US 2000-503554	20000211
PRIORITY APPLN. INFO.:				
			US 1997-991644	A 19971216
			WO 1998-US26759	W 19981216

AB The present invention provides an inexpensive and sensitive device and method for detecting and quantifying analytes present in a medium. The device comprises a metalized film (20) upon which is printed a specific, predetd. pattern of analyte-specific receptors (25). Upon attachment of a target analyte to select areas of the plastic film upon which the receptor is printed, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device.

IC ICM G01N021-47

ICS B41M003-00

CC 9-1 (Biochemical Methods)

IT Bacteria (Eubacteria)

Biosensors

Candida

Cellophane

Diapers

Drugs

Escherichia coli

Fungi

Haemophilus influenzae

Hepatitis

Human immunodeficiency virus 1

Human immunodeficiency virus 2

Latex

Neisseria meningitidis

Neoplasm

Optical diffraction

Rous sarcoma virus

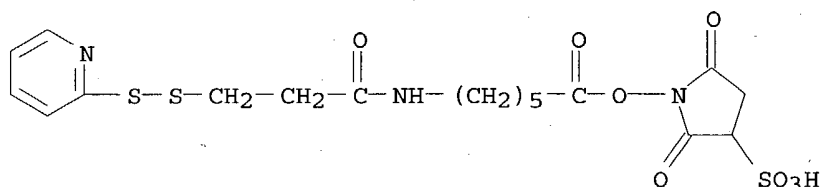
Salmonella
 Streptococcus group A
 Streptococcus group B
 Streptococcus pneumoniae
 Virus
 Yeast
 (optical diffraction biosensor)

IT Antibodies
 Carbohydrates, analysis
 Carcinoembryonic antigen
 Enzymes, analysis
 Glass, analysis
 Haptens
 Hormones, animal, analysis
 Lipids, analysis
 Nucleic acids
 Polycarbonates, analysis
 Polysaccharides, analysis
 Proteins, general, analysis
 Rheumatoid factors
 RL: ANT (Analyte); ANST (Analytical study)
 (optical diffraction biosensor)

IT 169751-10-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (optical diffraction biosensor)

IT 169751-10-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (optical diffraction biosensor)

RN 169751-10-4 HCAPLUS
 CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[1-oxo-6-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxy]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:43704 HCAPLUS

DOCUMENT NUMBER: 128:152804

TITLE: Antibody immobilization using heterobifunctional crosslinkers

AUTHOR(S): Shriver-Lake, Lisa C.; Donner, Brian; Edelstein, Rebecca; Breslin, Kristen; Bhatia, Suresh K.; Ligler, France S.

CORPORATE SOURCE: Center for Bio/Molecular Science and Engineering,

Naval Research Laboratory, Washington, DC, 20375-5348,
USA

SOURCE: Biosensors & Bioelectronics (1997), 12(11), 1101-1106
CODEN: BBIOE4; ISSN: 0956-5663

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Covalent attachment of functional proteins to a solid support is important for biosensors. One method employs thiol-terminal silanes and hetero-bifunctional crosslinkers such as N-succinimidyl 4-maleimidobutylate (GMBS) to immobilize proteins through amino groups onto glass, silica, silicon or platinum surfaces. In this report, several heterobifunctional crosslinkers are compared to GMBS for their ability to immobilize active antibodies onto glass cover slips at a high d. Antibodies were immobilized at densities of 74-220 ng/cm² with high levels of specific antigen binding. **Carbohydrate**-reactive crosslinkers were also compared to GMBS using a fiber optic biosensor to detect fluorescently-labeled antigen. At the concns. tested, the antibodies immobilized with **carbohydrate**-reactive crosslinkers bound more antigen than GMBS immobilized antibodies as indicated by the fluorescence signal.

CC 15-1 (Immunochemistry)
Section cross-reference(s): 9

IT Immunoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(G; amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies to)

IT Antibodies
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of)

IT **Biosensors**
Immobilization, biochemical
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

IT Glass, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

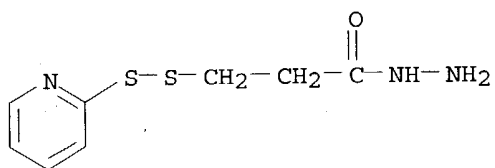
IT Crosslinking agents
(heterobifunctional; amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

IT 55750-63-5 58626-38-3 68181-17-9, SPDP 112241-19-7
115616-51-8 157797-94-9 **158913-22-5** 174422-72-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

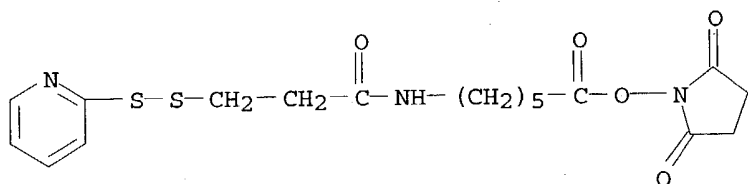
IT **115616-51-8 158913-22-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

RN 115616-51-8 HCAPLUS

CN Propanoic acid, 3-(2-pyridinyldithio)-, hydrazide (9CI) (CA INDEX NAME)



RN 158913-22-5 HCAPLUS
CN Propanamide, N-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-(2-pyridinyldithio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT